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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,905	11/15/2000	Shinya Abe	L8462.00102	8167

7590 05/18/2004

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EXAMINER
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CHU, KIM KWOK

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/711,905

Applicant(s)

ABE, SHINYA

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,9-11,14-16,19 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 4,5,7,8,12,13,17,18,20,21,25 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5&amp;6</u> . | 6) <input type="checkbox"/> Other: ____  |

***Specification***

1. The disclosure is objected to because of the following informalities:

(a) throughout the specification, spaces between words are not distinguishable. For example, in the abstract, on page 60, last 2 line, the term "aphotosensitivematerialfilm which" has no spaces between words; and

(b) similarly, on page 1, line 9, words in the term "afocusing control....." are not clearly separated by spaces.

Appropriate correction is required.

***Claim Objections***

2. Claims 1-26 are objected to because of the following informalities:

(a) in claim 1, line 4, words in the term "an objective lens which is focusing-controlled" are not clearly separated by spaces;

(b) in claim 5, line 4, words in the term "converged through an objective lens which is focusing-controlled" are not clearly separated by spaces;

(c) in claim 6, line 4, words in the term "medium reflects, ....." are not clearly separated by spaces;

(d) in claim 9, line 9, words in the term "of the objective lens ....." are not clearly separated by spaces;

(e) in claim 13, line 1, words in the term "Amethod ....." is not clearly separated by a space;

(f) in claim 14, line 5, words in the term "such that a distance from a recording medium....." are not clearly separated by spaces;

(g) in claim 18, line 5, words in the term "such that a distance from a recording medium....." are not clearly separated by spaces;

(h) in claim 19, line 2, words in the term "receiving means ....." are not clearly separated by spaces;

(i) in claim 22, line 12, words in the term "of thickness toward....." are not clearly separated by spaces; and

(j) in claim 26, line 8, words in the term "which maintains a distance between....." are not clearly separated by spaces.

3. The claims not specifically mentioned above are also objected based upon their dependence on an objected claim.

**Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

5. Claims 1-3, 9-11, 14-16 and 22-24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Willis (U.S. Patent 4,264,986).

Willis teaches a focusing process used in an information recording unit for forming a master of a data recording medium having all of the steps as recited in claims 1-3. For example, Willis teaches the following steps:

(a) as in claim 1, a recording light 26 is modulated in accordance with information to be recorded is converged through an objective lens 31 (Fig. 2);

(b) as in claim 1, the objective lens 31 is focusing-controlled such that a distance from a recording medium 11 remains constant, and information is recorded on the recording medium (Fig. 2; column 4, lines 20-24);

(c) as in claim 1, the recording medium 11 is a photosensitive material film applied to a surface of a base (Fig. 2, column 4, lines 4 and 5; the recording layer 11 is a

photosensitive layer having two states which can be changed by the recording light);

(d) in claim 1, the focusing control of the objective lens 31 is executed to a state that the position of a focal point of the objective lens 31 has shifted a predetermined fine distance which is smaller than a film thickness of the photosensitive material film, in the direction of thickness, toward inside from a surface of the photosensitive material film (Fig. 2; column 11, lines 62-68);

(e) as in claim 2, the predetermined fine distance has a value which is in the range of approximately  $1/3$  to  $2/3$  of the film/layer thickness of the photosensitive material film/layer ( Fig. 2; column 11, lines 62-68); and

(f) as in claim 3, the predetermined fine distance has a value which is approximately  $1/2$  of the film thickness of the photosensitive material film (Fig. 2; column 11, lines 62-68);

4. Claims 9-11, have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Therefore claims 9-11 correspond to claims 1-3 and are rejected for the same reasons of anticipation as used above.

5. Claims 14-16 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Therefore claims 14-16 correspond to claims 1-3 and are rejected for the same reasons of anticipation as used above.

6. Claims 22-24 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Therefore claims 22-24 correspond to claims 1-3 and are rejected for the same reasons of anticipation as used above.

7. Claims 6 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ishibashi (U.S. Patent 5,905,699).

Ishibashi teaches a method of detecting a deviation of a focal point position having all of the steps as recited in claim 6. For example, Ishibashi teaches the following steps:

(a) as in claim 6, the detection of the deviation is based on an intensity distribution of a reflected light which is generated as a recording medium 100 reflects through an objective lens 203 (Figs. 4 and 9; photodetector 213 detects the intensity distribution and obtains the deviation as expressed in focus error);

(b) as in claim 6, a recording light 210 which is modulated in accordance with information to be recorded (Figs. 1 and 4); and

(c) as in claim 6, a discrepancy of a distance between the objective lens 203 and the recording medium 100 from a desirable distance is detected (Figs. 7 and 9; focus error is generated).

8. Claim 19 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above. Therefore claim 19 corresponds to claim 6 and is rejected for the same reasons of anticipation as used above.

***Allowable Subject Matter***

9. Claims 4, 7, 8, 12, 17, 20, 21 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 5, 13, 18 and 26 are allowable over prior art.

11. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 4, 5, 12, 13, 17, 18, 25 and 26 the prior art of record fails to teach or fairly suggest a feedback control having the following features:

(a) the feedback control is performed using different light whose wavelength is longer than that of the recording light such that a distance between the objective lens and the recording medium remains constant; and

(b) a control target position for the feedback control is corrected based on a detected discrepancy of the distance between the objective lens and the recording medium from a desirable distance such that the distance between the objective lens and the recording medium becomes the desirable distance.

As in claims 7, 8, 20 and 21, the prior art of record fails to teach or fairly suggest a feedback control having the following features:

(a) a light receiving surface of the light receiving means is arranged confocal with respect to the recording medium, and

(b) a judgment means judges an intensity at the center inside the spot and a distance between the center of the spot and a point at which an intensity of a diffraction ring of the spot to thereby detect the discrepancy of the distance between the objective lens and the recording medium from a desirable distance.

### **Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagata et al. (6,275,463) is pertinent because Nagata teaches a photodetector having light receiving areas.

Terasaki et al. (5,659,534) is pertinent because Terasaki teaches a second laser source for generating a focus servo control.

Kimura (4,624,914) is pertinent because Kimura teaches an optical recording medium having a photosensitive layer.

Caraballo (4,335,173) is pertinent because Caraballo teaches a light beam focused inside a recording layer.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for  
entry. Or:

(703) 746-6909, (for informal or draft communications,  
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park  
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor  
(Receptionist).

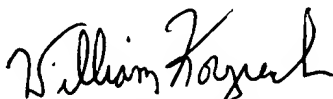
Any inquiry of a general nature or relating to the status of  
this application should be directed to the Group receptionist  
whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Kim CHU  
whose telephone number is (703) 305-3032 between 9:30 am to 6:00  
pm, Monday to Friday.

KC 5/11/04

Kim-Kwok CHU  
Examiner AU2653  
May 11, 2004

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WILLIAM KORZUCH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600